

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 1, 2008 has been entered.

Claim Rejections - 35 USC § 102

1. Claims 13 – 29, 35-37, 44-45 and 49-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Jialanella (US 6,300,398).

Regarding Applicant's Claim 13 and 35-37 Jialanella discloses composition of a linear or substantially linear low density polyethylene and a wax, including low molecular weight polyethylene wax(see abstract, lines 10 –35 ,column 3 and line 20 – 60,column 13), having polydispersity about 2 (see column 13,lines 50 – 54).

Regarding Applicant's Claims 13 – 29 and 51: composition disclosed by Jialanella is being substantially same as Applicant's, will inherently have same physical properties including Modulus, Elongation at break, Stress Yield and Melt flow. Burden shifts to the Applicant to prove the contrary.

Regarding Claims 44 and 45 see lines 54- 60,column 13 and 18 – 30,column 13.

Regarding Claim 49 Jialanella discloses that composition was prepared using Haake mixer(see lines 55-65,column 23)

Regarding limitation of Claim 50 as “ swelling agent” – Jialanella discloses that composition can comprise plasticizer(see lines24-29,column 2).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 30 –33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jialanella(US 6,300,398) as it applied to claims 13 – 29, 34-37,44-45 and 49 above, and further in view of Polywax Polyethylene (Baker – Hughes web site publication).

Jialanella discloses composition ,wherein polymer has degree of long chain branches in a range from 0.01 – 3 per 1000, (see line 40,column 3) which encompasses degree of branching claimed by Applicant for first polymer component P(i), but silent about branching degree of low molecular weight polyethylene wax. Thus implying that low molecular weight polyethylene wax with this property(degree of branching) is known in the art (and commercially available), is suitable for the invention disclosed by Jialanella with reasonable expectation of adequate results. Low molecular polyethylene wax with no branching, 100% linear, that will satisfy limitation claimed by Applicant in Claims 30 –33, disclosed by Baker –Hughes web site publication as being available for thirty years, incorporated herein as a reference.

Thus use of 100% liner low molecular weight polyethylene wax in invention claimed by Jialanella would have been obvious with reasonable expectation of success

absent showing of unexpected results that can be clearly attribute to claimed degree of branching by Applicant.

3. Claims 38 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jialanella (US 6,300,398) as applied to claims 13 – 29, 35 -37, 44-45 and 49 above, and in view of Kokko (Metallocene-Catalyzed Ethene Polymerization: Long-Chain Branched Polyethylene, September 2002).

Jialanella discloses composition, wherein polymer has long chain branching, but silent about length of the branching chains(see line 40,column 3).

However, Kokko teach that short chain branches, less than 40 carbon atoms will interfere with formation of crystal structure of polyethylene (see page 1,second paragraph) and when branch length increases they (chains) become able to form lamellar crystals.

Therefore, it would have been obvious to one ordinary of skill in the art at the time of the invention to use composition of Jialanella wherein polymer has long chain branching with length higher than 40 carbon atoms per teaching of Kokko, in order to increase overall crystallinity and probability for heterocrystallization with other polymers in composition.

4. Claims 46 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jialanella (US 6,300,398) as applied to claims 13 – 29, 35 -37, 44-45 and 49 above and in view of Eastman publication (EP) “ Epolene E-20 Wax – Extrusion lubricant for Fractional Melt High-Density Polyethylene (HDPE)”, pages 1-4, September 1999.

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As it was discussed above Jialanella discloses composition, wherein low molecular component (wax) has density at least about 0.925 g/cc or higher as most preferable, but not explicitly discloses waxes with density above 0.950 g/cc (see lines 54-60,column 13) and pointing out that wax should have high melting point, preferably 10⁰ C and even more preferably 30⁰ C than a polymer(see lines 18 – 25, column 13).

EP publication discloses composition of HDPE with low molecular weight polyethylene wax, wherein wax (see EP : “Epolene E-20”, incorporated herein as a reference) has degree of polymerization low than 200, based on M_n value of 1600 and density 0.96 g/cc , which is indicate high degree of crystallinity and softening point above 110 ⁰C.

Therefore, it would have been obvious to one ordinary of skill in the art at the time of the invention to substitute wax in composition discloses by Jialanella for Epolene E-20 or to wax with even higher melting point in order to increase working temperature range of the composition.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-33, 35-41 and 44-51 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-28 of copending Application No. 11/577,250. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

1) claimed subject matter in both applications based on substantially same composition and

2) Claim 49 of Application No. 10/553,293 claimed use of this composition for variety of molded articles, which is the claimed subject matter of copending Application

No.11/577,250.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

6. Applicant's arguments filed April 1, 2008 have been fully considered but they are not persuasive.

6.1. Applicant's argue that amended Claim 13 (subject matter of Claim 34 was incorporated to Claim 13) is patentable over Jialanella. However, both claims (13 and

34) were previously rejected as anticipated by Jialanella and also rejected again in instant Office action (see paragraph 1 above) as anticipated by same reference.

For this reason Applicant's argument is not persuasive.

6.2. Applicant's also argue that one can not determine presence of crystallinity in polyethylene by density of the polymer. However, evidence that crystallinity is a linear proportional function from density (see Office action mailed on September 11,2006 – Polyethylene, Product and properties., Technical publication by Basell, pare 3, Fig.4) were provided to Applicant.

Therefore, this argument is not found persuasive.

Conclusion

THIS ACTION IS NOT MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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